

## UNITED STATES PATENT OFFICE

1,947,459

## PROCESS OF IMITATING SURFACES

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Application February 29, 1928. Serial No. 257,931

7 Claims. (Cl. 41—30)

This invention is concerned with the art of simulating the natural appearances of building materials, and other materials, and has for its general object the provision of a process of forming surfaces on partition and wall board such as plaster board, asbestos board, etc., whereby when the board is finished it will have the appearance of building material such as grained wood, marble, tile and the like.

More specifically, my invention is concerned with the provision of a process for finishing the surfaces of wall and partition board during the manufacture thereof, whereby the board surface may be completely finished and ready for installation in the building construction without necessitating any further painting, staining, varnishing, etc.

Other objects of my invention will hereinafter become apparent from the following description which refers to the accompanying drawings, illustrating a form of means for effectively working the steps of my process. The essential characteristics of the invention are summarized in the claims.

In the drawings, Fig. 1 is a fragmentary perspective view of a semi-manufactured wall board; Fig. 2 is a perspective view of an impression plate for effecting the formation of interstices in grain pattern upon the board during the process of its manufacture; Fig. 3 is a form of press in which the plate shown in Fig. 2 may be used to exert a final gauging compression on the semi-finished board illustrated in Fig. 1; Fig. 3a is a fragmentary section comparing finished and unfinished boards and illustrates the reduction in thickness which may be effected by the press; Fig. 4 is a diagrammatic representation of a machine adaptable for use in applying finishing materials to the surface of the body of the board after it has been completely formed; Fig. 5 is an enlarged cross sectional view of a portion of the board after having been formed in the press shown in Fig. 3; Fig. 6 is a view similar to Fig. 5 but showing the board with the surface interstices thereof filled to present a smooth surface; Fig. 7 shows one manner of completing or finishing the board surface by the use of a stain and a coating of transparent or translucent material such as varnish, etc.; Fig. 8 shows an alternate manner of completing the finished surface of the board; and Fig. 9 illustrates a form of my invention wherein two patterns are placed on the board.

My invention contemplates the treating of the material comprising the body of the plaster board

during the process of the manufacture of the board, and particularly at the time the board is being reduced from a semi-plastic to a hard consistency, or when the board is being reduced to gauge thickness. Wall board or partition board may be formed of various materials, usually fibrous in nature, such as asbestos board and wood pulp board, but other forms of board may comprise a layer or body of gypsum between thick paper layers, and for the purpose of setting forth one way of using my process I will explain the manner of its use in connection with the manufacture of asbestos board.

The mineral asbestos as is well known in its natural state, is a fiber in soft rock formation which is first treated by being disintegrated in such manner as to not destroy the elongation characteristic of the individual fibers, and these fibers are treated by the use of the usual paper process of flotation and screening to bring the material into a sheet form, which will have sufficient body to permit of its being handled during the final manufacturing steps of producing a hard board. These sheets are usually placed in a press and subjected to severe pressure, in some instances while in the environment of heat, to reduce the board to the desired hardness and gauge. An asbestos board produced in this manner has the appearance of resembling somewhat that of a gray plaster, but the color may be controlled to a certain extent by the introduction in the mixture comprising the body of the board of a coloring matter.

I propose to form in the surface of the board, as it is being subjected to the final forming pressure, interstices in the finished face thereof, which are prearranged in such form as to give a graining effect in simulation of the natural appearance of wood or the natural configuration or formation of the marble grain or vein usually present or observable in a slab of marble, and I thereafter fill these interstices with a plastic pigment or I may fill these pockets or surface openings with a plaster sufficiently dissimilar in its body structure from the body structure of the asbestos board whereby, when the board and filling are stained, a contrast corresponding to the natural contrast of colors in the material being imitated, will be presented. I may thereafter treat such ground surface in several ways to bring about the desired highly pleasing result in the appearance of the board surface.

In Fig. 3 of the drawings I diagrammatically show a press comprising a ram 10, carrying a head 11, which ram is supported on a frame 12. The